

CLAIMS

1. Electronic game system comprising a central processing unit, a display device (D) and at least one universal displaceable input actuator (M; 14; 16) that can be held in the player's hands and can generate standard control information for several electronic game programs that can all be executed by the processing unit, characterised in that it comprises means ( $E_x$ ,  $R_i$ ,  $E_i$ ,  $R_x$ ) of transmitting / receiving signals between a fixed part (D; 12) of the system and the said actuator (M), processing means capable of determining path time data for transmitted signals to generate one or more items of actuator position and / or orientation information, and control means that can apply controls based on the position and / or orientation information, to the processing unit to act on the displacement of virtual objects displayed on the display device.

2. System according to claim 1, characterised in that transmission / reception means provided on the fixed part of the system include transmitters or receivers provided close to the display device.

3. Game system according to either claim 1 or 2, characterised in that it comprises at least one receiver on the fixed part and at least one transmitter on the actuator, and in that the said transmitter ( $E_i$ ) is capable of transmitting actuator identification information to the central unit through the said receiver.

4. Game system according to claim 3, characterised in that it also comprises a transmitter ( $E_i$ ) on the actuator capable of transmitting actuation information

determined from an actuatable element provided on the actuator, through a receiver on the fixed part, to the central unit.

5. Game system according to either claim 1 or 2,  
characterised in that it comprises a plurality of  
transmitters ( $E_x$ ) on the fixed part and a plurality of  
receivers ( $R_i$ ) on the actuator.

10. System according to one of claims 1 to 5,  
characterised in that the processing means are capable of  
determining changes in the position of the actuator with  
five degrees of freedom.

15. System according to one of claims 1 to 5,  
characterised in that the processing means are capable of  
determining changes in the position of the actuator with  
six degrees of freedom.

7. System according to claim 8, characterised in  
that the actuator comprises three non-aligned  
transmitters ( $E_1 - E_3$ ) or receivers.

9. Universal displaceable input actuator (M; 14; 16)  
20 that can be held in a player's hands, to apply control  
signals to an electronic game system comprising a central  
processing unit and a display device, characterised in  
that it comprises means of transmitting signals by  
wireless transmission from at least two transmitters ( $E_1$   
25 -  $E_3$ ) at a distance from each other on the actuator, the  
said transmitters transmitting distinct signals that can  
be used to determine the position and / or orientation of  
the actuator from at least two fixed receivers ( $R_x$ ).

10. Actuator according to claim 9, characterised in  
30 that at least one transmitter ( $E_1 - E_3$ ) is capable of  
transmitting actuator identification information.

11. Actuator according to either claim 9 or 10,  
characterised in that at least one transmitter ( $E_1 - E_3$ )  
is also capable of transmitting actuation information  
determined from an actuatable element provided on the  
5 actuator.

12. Actuator according to one of claims 9 to 11,  
characterised in that it comprises a displacement control  
part that moves with respect to another part, in that the  
transmitters are fixed on the displacement control part,  
10 and in that at least one receiver is fixed on the said  
other part.

13. Universal displaceable input actuator (M; 14;  
16) that can be held in a player's hands, to apply  
control signals to an electronic game system comprising a  
15 central processing unit and a display device,  
characterised in that it comprises means of reception of  
signals sent by wireless transmission at at least one  
receiver ( $R_i$ ), the receiver being designed to receive  
distinct signals transmitted by at least two fixed  
20 transmitters ( $E_x$ ) to determine the position and / or  
orientation of the actuator.

14. Actuator according to claim 13, characterised in  
that it comprises a displacement control part free to  
move with respect to another part, and in that the  
25 receiver or each receiver is fixed on the displacement  
control part, and in that at least one transmitter is  
fixed on the said other part.